

fairly well distributed around Hatley in a more or less pronounced form, according, no doubt, to the abundance or absence of the asbestos formation in the vicinity of the plants.

In conclusion, I trust I may not be the only one to comply with Mr. McColl's suggestion, and that ere long we may hear from other members of the Society, relating their red-letter days. The photograph from which the illustration was made was taken by the Geological Survey at Ottawa, and I am indebted to Dr. M. O. Malte, chief botanist, National Herbarium, Ottawa, for it, the specimen having been presented to the Herbarium.

MONTREAL, P. Q.

Data on *Scolopendrium vulgare* J. E. Smith

W. R. MCCOLL

As the station at Georgian Bay, and the immediate vicinity of Owen Sound, Ont., is the only known home for *Scolopendrium* in Canada (if we omit a small colony in New Brunswick) it makes the notes by Mabel R. Hunter, in the *FERN JOURNAL*, Vol. 14, No. 4, 1924, concerning this plant in New York State unusually interesting to one who has for some years studied and taken the plant in this vicinity.

It is quite evident from the quantities mentioned in the above article, (two hundred and fifty plants being found in an area ten feet square), that conditions in New York State must be altogether favorable for this plant's requirements.

The Hart's tongue here, as it is commonly called, is intermittently scattered over an area of ten or twelve miles in suitable situations, on shaded limestone rock talus, broken outcrops of limestone, in limestone vugs,

around and underneath limestone boulders in shade of hardwood, on the walls of rock crevices where the openings are ten to fifteen inches wide, and upon shaded knolls.

It shows a persistent affinity for *Polystichum lonchitis* Roth, growing like twins with this hardy fern, especially when they are found in rock crevices or cropping out from beneath limestone boulders where their roots can feel the coolness of the rock surface, cuddled in as they are between the earth and stone.

We hear of plants with from ten to thirty fronds each, but no such thrifty specimens are found here. The average clump bears more often from three to six fronds and the longest leaf ever found measured twenty and one half inches—a single specimen only.

While the plants are apparently healthy, they seldom grow much over twelve to fourteen inches, and many appear pale in color. The finest plant seen here grew on a fifteen inch earth-capped igneous boulder and contained over a dozen fronds, it grew in shade and received nourishment from the wash of a gentle slope; this plant was removed carefully and planted in my garden on the north side of the house where I watched it for four years, dwindle and grow smaller, producing immature, ill-shaped, irregular edged fronds, lacking fruiting, and altogether uninviting in appearance.

Two years ago I planted another good specimen between the garden earth and the limestone foundation of the house on the north side where the roots could feel the coolness of the stones, and shaded it with *Aspidium spinulosum intermedium*; this was a success, grew healthily and sent up nice new leaves, fruited nicely, produced two forked fronds, and was green and healthy when winter tucked it in under a blanket of snow. The altitude here ranges from 586 to 723 feet, and while the

fern can usually be found, if one knows where to look for it, it is nowhere in such abundance as it is in New York State. The season of 1923 was particularly cold in the spring, and the late summer intensely hot, with little rain, the plants drooped, turned quite soft, lifeless, leathery, and went into winter quarters in this weakened condition. In the fall of 1924 the two best stations were thoroughly searched for good specimens, one in hardwood shade, strewn with large limestone boulders, the other on broken limestone outcrops, and neither station produced two dozen good plants, in fact it appeared as if the weather conditions of 1923 had practically ruined both locations.

In a search of nine years, only one specimen has been taken with long ears below (*auritum*) but the specimen is a splendid one, having ears two inches long. Short-eared specimens occasionally occur also, forked specimens are not uncommon, while two or three, with lateral branches protruding from above the centre of the frond, two to two and a half inches in length, are great rarities.

A form discovered last season was quite new to me, being long and narrow with extremely heavy, dark brown sori and the margins of the leaf deeply waved or undulating, the curves being uneven and erratic. This is scarce, and apparently only found on specimens that have survived under the deep snow of the previous winter. Possibly half a dozen fronds have been taken fruited from apex to base, the lower part of the frond not so fully covered as the apex; these are extremely rare, but fortunately one specimen found measured twenty inches long. Many freak forms can be picked up, such as auger shapes, round tips, moonwort shapes, twin stipes, double lobed tips, and many others. Forms most difficult to obtain are the narrow attenuate sort, with small lobes below, half inch wide at base and

gradually expanding for two-thirds of its length to a width of one inch, the frond being about fifteen inches long; and a short, broad variety, measuring about two inches wide, of almost equal width from tip to base, not over ten inches long. The third of these rarities is a single plant containing seven fronds, none of which measure over one half inch in width, being about nine inches long, and of an equal width up to the sharply tapered and pointed apex; no swelling to the middle of the frond. This is thought to be our rarest form.

OWEN SOUND, ONTARIO

Notes on Cinnamon Ferns

E. M. KITTEDGE

Up to 1919 I had paid little heed to any ferns except the Maiden-hair and Christmas ferns, and then only for their decorative value. Cinnamon ferns were known to me, but I considered them ugly. In extenuation let me say that the plants were always much broken and discolored by the time I could see them. After seeing a rare fern exhibited with pride by the finder, and learning a little of the joy there might be in finding an unusual form, I began looking for variations from the type in both Interrupted and Cinnamon ferns, mainly, I think, because they were large plants and easily seen. During the next three summers I collected a great many fronds of both species, and regularly burned up the seasons "catch" at the summer's end, as there seemed never to be any of particular interest. In August, 1923, I came upon five Cinnamon ferns whose fronds were strikingly different from any I had seen, the lower inner pinnules being much elongated and incised, and so placed